

LEPS Design and Technology Progression

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design Developing, planning and discussing ideas.	• Generate ideas and explain what they are going to do. • Identify who they intend to design and make a product for. • Model ideas in card and paper. • Build on ideas from research.	• Generate and develop ideas through discussion, observation, drawing and modelling. • Identify a purpose for what they intend to design and make. • Create a design checklist. • Draw a design and label parts.	• Generate ideas for a product and consider its purpose and the user/s. • Identify a purpose and create their own design criteria for a successful product. • Plan the order of the work before starting. • Explore and develop a design, and make drawings with labels when designing.	• Generate ideas for a product and consider its purpose and the user/s. • Identify a purpose and have a clear plan of how to create the product, which materials to use and the process. • Identify where the process might go wrong and come up with solutions. • Evaluate similar products and plan a design criteria for the product. • Explore and develop a design, and make drawings from different views and labelling special features.	• Generate ideas through group discussion and identify a purpose for their product. • Draw up a specification for their design. • Identify a purpose and have a clear plan of how to create the product, which materials to use and the process. • Suggest alternative methods of making if the first attempts fail. • Use results of investigations, information sources including ICT when developing design ideas.	• Communicate detailed ideas through labelled drawings. • Develop a specification for their design by modelling proposals in a variety of ways (paper, 3D models, ICT). • Plan the order of their work carefully, choosing appropriate materials. • Suggest alternative methods of making the first attempts fail.

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Make Working with tools, equipment, materials and components to make quality products (inc.food).	- With help, measure, mark out, cut and shape a range of materials. - Use tools (scissors) and a hole punch safely. - Assemble, join and combine materials and components together using a variety of methods (glues or tape). - Select and use appropriate fruit and vegetables, processes and tools. - Use basic food handling, hygienic practices and personal hygiene. - Improve the appearance of the product by using finishing techniques	- Begin to select tools and materials and use the vocabulary to describe and name them. - Measure, cut and score with some accuracy. - Use hand tools safely. - Assemble, join and combine materials and components together using a variety of materials and making changes to improve as they go along. - Use basic sewing techniques. Cut shape and join fabric to make a simple garment. - Follow safe procedures for food safety and hygiene.	- Select tools and use techniques for making their product. - Measure, mark out, cut, score and assemble components with more accuracy. - Work safely and accurately with a range of tools. - Change work as the product progresses to improve it. - Measure, tape or pin, cut and join fabric with some accuracy. - Demonstrate hygienic food preparation and storage. - Use a range of equipment to improve the finish including ICT.	- Select tools and use techniques for making their product. - Measure, mark out, cut, score, shape and assemble components with accuracy using appropriate tools. - Join and combine materials and components accurately in temporary and permanent ways. - Sew using a wide range of different stitches, weave and knit. - Measure, tape or pin, cut and join fabric with greater accuracy. - Use simple graphical communication techniques. (2D and 3D images using ICT)	- Select appropriate materials, tools and techniques. - Measure and mark out accurately. - Use skills in using different tools and equipment safely and accurately. - Weigh and measure accurately (time, dry, ingredients, liquid) - Apply the rules for basic food hygiene and other safe practices e.g. hazards to the use of ovens. - Cut and join with accuracy to ensure there is a good-quality finish to the product.	- Select appropriate materials, tools, components and techniques. - Assemble components accurately to make working models. - Use tools safely and accurately. - Construct products using permanent joining techniques and test these to last. - Anticipate issues and make modifications as they go along. - Pin, sew and stitch materials together to create a product. - Achieve a quality, long-lasting product.

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Evaluate Evaluating the process and products created.	- Evaluate by discussing how well the product works (does it have the desired purpose?) - Evaluate by asking questions about what they have made and how they have made it.	- Identify the products as they are being developed for possible improvements and changes. - Evaluate by discussing how well the product works (does it have the desired purpose?) - Evaluate by asking questions about what they have made and how they have made it.	- Evaluate the product against the original design criteria. - Disassemble and evaluate familiar products.	- Evaluate their work both during and at the end of the project. - Evaluate their products carrying out appropriate tests.	- Evaluate a product against the original design specification. - Evaluate it personally and seek evaluation from others.	- Evaluate their products identifying strengths and areas for development, and carrying out appropriate tests. - Record their evaluations using drawings with labels. - Evaluate against their original design criteria and suggest ways that their product could be improved.

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Technical knowledge	<u>By the end of Year 2:</u> - Know about the simple working characteristics of materials and components, the movement of simple mechanisms, how freestanding structures can be made stronger, stiffer and more stable; use the correct technical vocabulary. - Explore and use mechanisms, such as levers, sliders, wheels and axles, in their products.		<u>By the end of Year 4:</u> Know that materials have functional and aesthetic qualities; that systems have an input, process and output; how to program a computer to control their products; how to make strong, stiff shell structures; use the correct technical vocabulary.		- Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. - Understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linkages. - Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and motors. - Apply their understanding of computing to programme, monitor and control their products.	- Know that materials have functional and aesthetic qualities; that systems have an input, process and output; how to program a computer to control and monitor their products; how to reinforce and strengthen a framework; use the correct technical vocabulary. - Apply their understanding of how to strengthen, stiffen and reinforce more complex structures - Understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linkages. - Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and motors - Apply their understanding of computing to programme, monitor

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Cooking and nutrition	- Begin to understand that all food comes plants or animals. - Begin to understand that food has to be farmed, grown or caught. - Begin to understand the importance of working safely and hygienically. Cooking and nutrition: - Can I cut food safely? - Can I describe the texture of foods? - Can I wash their hands and make sure that surfaces are clean? - Can I think of interesting ways of decorating food they have made, e.g. cakes? - Can I say what healthy foods are? - Can I say where some food comes from?	- Know that food comes from plants or animals and that it is farmed or caught. - Know how to prepare simple dishes safely and hygienically without a heat source, name and sort foods into groups; know that everyone should eat at least five portions of fruit and vegetables a day. Cooking and nutrition: - Can I describe the properties of the ingredients I am using and why it is important to be varied in my diet? - Can I explain what it means to be hygienic? - Can I keep a hygienic kitchen? - Can I say where food comes from i.e. animals, underground, over ground etc?	Cooking and nutrition: - Can I choose the right ingredients for a product? - Can I use equipment safely? - Can I make sure that my product looks attractive? - Can I describe how my combined ingredients come together? - Can I set out to grow plants such as cress and herbs from seed with the intention of using them for my food product?	- Know that food is grown, reared and caught in the UK, Europe and the wider world. - Know how to prepare a variety of dishes safely and hygienically; that a healthy diet is made from a variety and balance of different food and drink; that food and drink are needed to provide energy for the body. Cooking and nutrition: - Can I say what to do to be hygienic and safe? - Can I think what I could do to present my product in an interesting way?	- Understand and apply the principles of a healthy and varied diet prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques - Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. Cooking and nutrition: - Can I describe what I do to be both hygienic and safe? - Can I present my product well?	- Know that food is grown, reared and caught in the UK, Europe and the wider world; that seasons may affect the food available; how food is processed into ingredients. - Know how to prepare and cook a variety of dishes safely and hygienically using, where appropriate, a heat source; that different food and drink contain nutrients, water and fibre that are needed for health. Cooking and Nutrition - understand and apply the principles of a healthy and varied diet - prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques - Understand seasonality, and know where and how a variety of ingredients are

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